CHAPTER 9

AIRCRAFT ENGINE MANAGEMENT SYSTEM (AEMS)

Aircraft engines must be accounted for and reported on in much the same fashion as aircraft. If the same engine were to remain installed in the same aircraft throughout the aircraft's service life, there would be little need to account for engines separately from aircraft. However, engines are constantly being removed and replaced due to maintenance actions. Engines rarely remain installed in the same airframe throughout the life of the aircraft.

INTRODUCTION TO THE AIRCRAFT ENGINE MANAGEMENT SYSTEM (AEMS)

LEARNING OBJECTIVES: Define the purpose of the Aircraft Engine Management System (AEMS). Identify the document that contains detailed instructions that govern the AEMS.

The Aircraft Engine Management System (AEMS) is an automated data engine management system that provides on-line inventory management and reporting of aircraft engines, propulsion systems, and modules.

Engines are the most expensive item of equipment in the Naval Air Logistics System in terms of unit cost and total dollar expenditure. The sizeable investment in aircraft engines requires close management control to shorten out-of-service time and reduce the quantity of spare engines needed.

Various Navy-wide aircraft engine management reports are developed by the Naval Air Systems Command (NAVAIRSYSCOM) on automatic data processing equipment from a master aircraft engine record file. This master file contains the status, custody, and performance history of each serially numbered aircraft engine in the active Navy engine inventory. This data is updated by Engine Transaction Reports and End-of-Quarter reports (ETRs and EOQs) from reporting custodians of naval aircraft engines. The data is transmitted by the custodians of engines to upper echelon commands. Upper echelon commands prepare failure rate reports and develop overhaul schedules.

Aircraft Engine Management System, NAVAIRINST 13700.15, and Aircraft Controlling Custodian (ACC) instructions prescribe reporting procedures for aircraft engine management and should be consulted when engine management reports are prepared. This chapter was written to familiarize you, the AZ, with engine management reporting procedures and applications at the operating squadron level.

NOTE: ETRs, EOQ reports, and Engine Record Cards (E cards) can be maintained and generated through the Navy Aviation Logistic Command Management Information System (NALCOMIS). This system allows users to generate, update or delete ETRs, EOQs, and engine record cards. Refer to *NALCOMMIS OMA End User's Manual* (EM) for detailed procedures in generating and maintaining these reports and records.

Q1. What system provides data on the inventory management and reporting of engines, propulsion systems, and modules?

Q2. What instruction prescribes reporting procedures for the AEMS?

ENGINE MANAGEMENT CODES

LEARNING OBJECTIVE: Identify codes used in the AEMS.

The AEMS encompasses all facets of aircraft engine accounting. Information generated by AEMS must be put into a usable format before it is of any use to maintenance managers. AEMS does this through engine management codes that simplify and standardize engine management reporting procedures. A standard abbreviated reporting system describes change in custody and status.

Engine management codes ease the burden of reporting custody and status changes. Information can be reported by using terminology (codes) that is understood Navy-wide. The following is a listing of some of the more commonly used codes in aircraft engine management:

Custodian codes are used to identify the controlling custodian or Naval Air Systems Command Fleet Support (FS) activity that has control of an engine.

Unit Identification Codes (UICs). Five-digit codes known as UICs identify reporting custodians. Activities that hold physical custody of engines are engine reporting custodians. UICs for reporting custodians are listed in Chapter 5, "Unit Identification Codes," of the *Navy Comptroller's Manual*, Volume 2, NAVSO P-1000-25, or can be obtained from the AEMS database.

Status codes are two-digit numbers that describe the condition of an engine, the purpose for which an engine is being used, or the stage of progress that an unserviceable engine or serviceable engine has reached in the maintenance cycle.

Status codes are shown in table 9-1.

STAR codes are two-digit numeric codes that describe or give reasons for transactions, such as strikes, transfers, acquisitions, or removals of aircraft engines. Status and STAR code combinations reflect current engine status. A Status code is sometimes used without a STAR code, but a STAR code is never used without a Status code. A STAR code amplifies or qualifies the Status code.

STAR codes are divided into the following five series:

Table 9-1.—Status Code Series and Their Categories

Status Code Series	Category
11	Installed Engines/Propulsion Systems
13	Installed Module
21	Serviceable Uninstalled Ready For Issue (RFI) Spare Engines/Propulsion Systems/Modules
22	Serviceable Uninstalled RFI Engines/Propulsion Systems/Modules (Fleet Activities Only)
23	Serviceable Uninstalled RFI Engines/Propulsion Systems/Modules (Commercial, rework, Naval Aviation Depot [NADEP], Navy Supply Center [NSC]/Supply Office [SUPO], Aerospace Maintenance and Regeneration Center [AMARC])
24	Serviceable Uninstalled Non-RFI Engines/Propulsion Systems/Modules
31	Unserviceable Engines/Propulsion Systems/Modules
32	Unserviceable Engines/Propulsion Systems/Modules In Transit
33	Uninstalled Unserviceable Engines/Propulsion Systems/Modules
36	Unserviceable Engines/Propulsion Systems/Modules For Rework/Repair at a Naval Aviation Depot (NAVAVNDEPOT OR NADEP) or Commercial Repair Activity
37 and 38	Engines/Propulsion Systems/Modules, Monetary Constraints or Awaiting Engineering Resolution
40	Engines/Propulsion Systems/Modules, Test Cell Correlation
41	Engines/Propulsion Systems/Modules, Disposition and Excess
46 and 47	Engines/Propulsion Systems/Modules, Bailed or Loaned
48	Engines/Propulsion Systems/Modules, Naval Air Maintenance Training Group
49	Engines/Propulsion Systems/Modules, Strike
90	Modular Propulsion Systems

50 series—Acquisitions
60 series—Transfers and receipts
70 series—Removals
80 series—Strikes
90 series—Miscellaneous

A detailed explanation of Status and STAR code combinations are listed in NAVAIRINST 13700.15.

Q3. What type of code is used to describe the condition of an engine, purpose for which the engine is used, or stage or progress the engine has reached in the maintenance cycle?

Q4. What series Status code is used to describe an installed operating engine?

Q5. What type of code describes or gives the reason for (1) strikes, (2) transfers, (3) acquisitions, or (4) removals?

Q6. A STAR code must always be used with what type of code?

Q7. What type of code amplifies an aircraft engine Status code?

ENGINE TRANSACTION REPORT (ETR)

LEARNING OBJECTIVES: Identify the purpose of Engine Transaction Reports (ETRs). Identify the deadline for submission of ETRs. Recognize situations that require submission of ETRs.

ETRs advise the controlling custodian of actions that concern the use, status, or custody changes of assigned engines. The report covers all transactions that occurred since the previous report. A report must be submitted not later than 2400 hours of the first working day following the date the action occurred. Should it become necessary to submit a late report, use the actual Julian date of action and indicate in the Remarks section that the report is late. Some situations that require submission of ETRs are listed below:

- The receipt or transfer of an aircraft with an installed engine
- The receipt or transfer of an uninstalled engine
- The removal or installation of an engine
- The cannibalization or strike of an engine
- The delay of an engine repair due to a shortage of parts

There are many other situations that require an ETR, however, those listed above are used most often.

ETR PREPARATION

The preparation of an ETR is a relatively simple (but important) task. NAVAIRINST 13700.15 contains guidelines and examples that cover almost any engine transaction. Figure 9-1 is an example of a message-type ETR prepared for transmission that reports four transactions. Transaction 019 reports an engine removed; transaction 020 reports the engine transfer. Transactions 021 and 022 show receipt and subsequent installation of the replacement engine.

Notice that fleet activities prepare ETRs in a horizontal line format. Most shore activities, however, submit ETRs electronically through the AEMS on-line computer terminal. These terminals are connected by telephone lines to a central computer that contains a master list of engines and other propulsion systems. ETRs can be directly entered into the AEMS database. Activities with access to AEMS computer terminals should use on-line reporting. Complete procedures for on-line reporting are outlined in NAVAIRINST 13700.15.

Q8. By what means is a controlling custodian advised of the status, use, or custody change of an assigned aircraft engine?

Q9. What is the deadline for submission of ETRs?

Q10. A total of how many transactions are required on an ETR that reports the removal and transfer of an engine and the subsequent receipt and installation of a replacement engine?

Q11. What is the preferred method of submitting ETRs for shore-based activities?

ETR NUMBERING

LEARNING OBJECTIVES: Describe how ETRs are numbered. Identify data elements and fields used on ETRs. Define retention requirement for ETRs.

ETRs submitted by reporting custodians are numbered sequentially throughout the calendar year (CY) beginning with report number 1 for the first report submitted on or after 1 January of the CY. Each successive report increases by one number until 31 December, after which ETR numbering restarts with report number 1 for the CY. Example: 1-96, 2-96, 3-96, etc. On the first ETR of each year, report the last CY

```
R 091411Z JAN 98 ZYB
FM    STRKFITRON ZERO ZERO ZERO
TO    COMNAVAIRPAC SAN DIEGO CA//N422G/N422C5/N422C52/N421/N421G//
COMSTRKFIGHTWINGPAC LEMOORE CA//N452/N45//
INFO  COMFIFTHFLT //41//
COMCARGRU SEVEN
COMFAIRWESTPAC ATSUGI JA//N421A//
USS NIMITZ
COMCARAIRWING NINE
BT
UNCLAS //N13700//
MSGID/GENADMIN/VFA-000//
SUBJ/AIRCRAFT ENGINE TRANSACTION REPORT 01-98 (NAVAIR 13700-9)//
REF/A/DOC/NAVAIRINST 13700.15B//
AMPN/REF A DELINEATES REPORTING PROCEDURES FOR THE AIRCRAFT ENGINE
MANAGEMENT SYSTEM.//
RMKS/1. VFA-000 ETR 01-98. LAST ETR 31-97 VFA-000 DTG 051411ZDEC97
001/0360347/24-74/98007/F404GE/402/63925/00927/FA18C/164968/2/5C/QWO007468//
002/0360347/24-60/98008/F404GE/402/63925/03368/57025//
003/0360079/21-61/98008/404GE/402/63925/57025/01379/03368/X//
004/0360079/11-NA/98008/F404GE/402/63925/FA18C/164968/2//
2. REMARKS: 001-RMVD SERNO 0360347 2 DUE TO COMPRESSOR FOD.
FAN 0313347, HPC 0319298, COMB 0324347, HPT 0329347, LPT 0334220, AB 0339219.
002-SERNO 0360347 TX TO AIMD USS NIMITZ DOC NUMBER 8008-G474.
003-RVCD SERNO 0360079 FM AIMD USS NIMITZ DOC NUMBER 8008-G474.
FAN 0314211, HPC 0319064, COMB 0324265, HPT 0329265, LPT 0334265, AB 0339159.
004-INSTLD SERNO 0360079 BUNO 164968 POS 2.//
```

Figure 9-1.—Engine Transaction Report (ETR).

ETR. Example: (Activity) 1-97, LAST CY ETR 154-96 DTG 312200Z DEC 96. The number of ETRs that can be submitted in any given calendar year is unlimited.

Q12. A reporting custodian submits four ETRs the first week of January 1997. How should the fourth ETR be numbered?

ETR DATA ELEMENT FIELDS

In the message shown in figure 9-1, each engine transaction is detailed on a separate line or lines. This format aids the personnel who enter the data into the data processing system used by controlling custodians to transmit engine data to the Naval Air Systems Command Headquarters.

If you understand the use of Status codes, STAR codes, and data elements, you should have little difficulty preparing ETRs no matter where you are assigned.

Engine transaction reports are made up of many data fields. Some data fields are required while others are optional and should be used only when necessary. Figure 9-2 is a Status/STAR code matrix for **installed** engines (Status Code II Series). A separate Status/STAR code matrix is provided for each status code series; for example 21, 22, 24, and so forth. Note that data items 0 through 6 and item 19 are required elements on all ETRs. Others are reported as the situation requires. Below is a brief description of each data element used on ETRs. Please refer to figure 9-2 while reading this section.

Item 0—Transaction serial number. The transaction serial number identifies each transaction submitted during a calendar year. Serial numbers begin with number 001 and run sequentially through 999. If number 999 is reached before December 31st, simply start over with number 001.

Item 1—Serial number. A unique serial number is assigned to identify each engine. This number must have seven digits. When the number has less than seven digits, add leading zeros.

Item 2—Status/STAR code. As previously discussed, Status/STAR codes describe the condition of an engine and the reason for submission of the ETR. Figure 9-3 shows the definition and application of

DATA ELEMENTS 0 TO 6 AND 19 ARE REQUIRED ON ALL ETR'S		11-48	11-NA	11-50	11-60	11-61	11-64	11-70	11-90
07	CONT CUST UIC			X		X	X		
08	(BLANK)								
09	FLT HRS SINCE NEW (NOTE 1)		X	x	X	X	X	X	X
10	REPT CUST REC FM/TRF TO				X	X			
11	CONT CUST TRF TO				X				
12	ACFT MODEL	X	X	X	X	X	X	X	X
13	ACFT BUNO/PSSN	X	X	X	X	X	X	X	X
14	ENG/PSSN/MOD POS	X	X	X	X	X	X	X	X
15	RMVL/DNGRD/REPR CODE								
16	QECA CONFIG/POS NR								
17	BCM/INSP CODE								
18	JOB CONT NMBR								

0 - TRAN SERNO **3 - TRANS JULIAN DATE** **6 - REPORTING CUSTODIAN**

1 - ENG SERNO **4 - ENG TYPE/MODEL** **19 - REMARKS**

2 - ST/ST CODE **5 - ENG SERIES**

Figure 9-2.—Engine/Propulsion System Required Data Fields.

Status/STAR code combinations for installed engines and propulsion systems. Refer to NAVAIRINST 13700.15 for a complete list of acceptable Status/STAR code combinations.

Item 3—Date. The five-digit Julian date indicates the date of the transaction; for example, 99020.

Item 4—Engine Type Model. This element identifies the type, model, and manufacturer of the engine; for example, T56A.

Item 5—Engines series. Identifies the engine series; for example, 14T.

Item 6—Reporting custodian. Item 6 identifies the activity, by UIC, that has reporting responsibility for the engine. More often than not, this is the same activity that has physical custody of the engine.

Item 7—Controlling custodian. The UIC identifies the major command that exercises administrative control of the engine, propulsion system, or

11-NA Installation of an RFI engine/propulsion system on an aircraft.

11-50 Receipt of an installed engine/propulsion system that is not presently in the Aircraft Engine Management System (AEMS) database.

11-60 Transfer of an installed engine/propulsion system.

11-61 Receipt of an installed engine/propulsion system.

11-64 Reporting an RFI installed engine/propulsion system in a stored aircraft regardless of stored location.

11-70 Reporting a change in aircraft model. The engine/propulsion system remains installed in the same bureau number (BUNO).

11-90 End-of-Quarter (EOQ) report of flight/operating hours on installed engines/propulsion systems.

Figure 9-3.—Status/STAR code category for 11 series installed engines/propulsion systems.

AEMS ENGINE/MODULE/REMOVAL/DOWNGRADE/REPAIR CODES

BASIC ENGINE	
Accident/Incident Damage	4B
Associated Engine Module Failure NOTE (1)	4A
Cannibalization	3W
Can't Trim	3A
Corrosion	2Q
Directed Removal NOTE (2)	4D
Excessive Maintenance NOTE (4)	3B
Fire	5B
Firefighting Chemical Ingestion	5A
Flameout	1A
HEMP/HSI	7E
High Time (Components/HEMP/HSI) NOTE (3)	7D
High Time Component Only NOTE (3)	7C
Hot Start	1B
Low Cycle Fatigue	6V
Low Torque/Power/Thrust/Efficiency	3R
Mod/TDC Inc	6A
Overhaul	5G
Overspeed	2F
Overtemp	6F
Smoke/Fumes in Cockpit	1Z
Temp Out of Limits	8B
Vibration	3D
FUEL SYSTEM	
Inability to Accelerate	3M
Inability to Start	3P
Fuel Leakage	7L
Unstable/Surging	3U
OIL SYSTEM	
Accessory Gearbox Malfunction	1G
Bearing Failure	8P
High Sump Pressure	9J
Excessive Oil From Breather	8A
High Oil Pressure	5Q
JOAP Lab Recommendation	8F
Low Oil Pressure	5W
Metal in Oil	2N

OIL SYSTEM (continued)	
Oil Consumption	3T
Oil Contamination	1W
Oil Leakage	7K
Oil Starvation	6E
Reduction Gearbox Failure	1R
COMPRESSOR	
Air Leakage	7J
Blade Blended Beyond Limits	6K
Bleed Valve Broke/Inop	8N
Compressor Case Crack	6P
Compressor Erosion/Corrosion	6R
Compressor/Fan VG Disconnect/Broke	6N
Compressor Stator Vane/Blade Cracked/Broken	6J
Compressor Rub	6L
Compressor FOD	5C
IGV Crack/Broke/Disconnect	2S
Inlet Case Crack	2A
Internal Noise/Binding/Shutdown	2C
Stall	6Q
TURBINE	
Blade Erosion	7U
Blade Broken/Cracked	7T
Blade Sulfidation	1V
Exhaust Duct Failure	4R
Internal Noise/Binding/Shutdown/Start	1T
Turbine Nozzle Failure	6T
Turbine Disk Failure	8C
Turbine FOD	5D
AFTERBURNER	
Flame Holder	8K
Liner Crack/Failure	8T
Mount Crack/Broke	8Q
Nozzle Cylinder Failure/Crack	8V
Nozzle Flap/Seal/Segment Crack/Failure	8X
Synch Ring/Actuator Ring Malfunction	1M
Variable Nozzle Failure	4S

Figure 9-4.—AEMS Engine/Module/Removal/Downgrade/Repair codes.

OTHER		OTHER (continued)	
Backfire(s) in Flight	1E*	Internal Failure Cause Unk	3Q*
Cylinder Failure	2U*	Nose Case Crack	6C*
Damaged in Transit	4L	Overboost	2G*
Diffuser Cracked	4M	Prop Shaft Loose	1S
Engine Decoupled	5U	Rear Case Cracked	7A*
Engine Seizure	4P	Sudden Stoppage	4J*
Faulty Handling/Dropped	3E	Super Charger Case Cracked	5E*
Front/Rear Case Cracked	7A		

NOTE (1): This code to be used on T-56, T400, T700, F404 and other modular engine sections (RFI sections) removed as a result of a failure in an associated module.

NOTE (2): This code is used when reporting custodians are directed by Type Commander/Functional Wing/ Commanding General Marine Air Wing and Commander Carrier Air Wing to remove an RFI engine from an aircraft and transfer to another reporting custodian.

NOTE (3): Enter in remarks of ETR the nomenclature of the high time component.

NOTE (4): Enter in remarks of ETR the actual discrepancy vice the words "Excessive Maintenance."

* Reciprocating Engines Only

Figure 9-4.—AEMS Engine/Module/Removal/Downgrade/Repair codes—Continued.

module asset (for example, COMNAVAIRLANT, COMNAVAIRPAC, CNATRA, and so forth). The reporting custodian usually reports directly to the controlling custodian.

Item 9—Flight hours since new. Self-explanatory. Drop all tenths of hours and do not round off or include test cell hours. Operating hours since new should reflect operating hours recorded in the applicable AESR. If less than five digits, add leading zeros; for example, 00104.

Item 10—Reporting custodian received from/ transferred to. Enter the UIC of the activity the engine was received from or is being transferred to.

Item 11—New controlling custodian transferred to. Identifies the new controlling custodian, by UIC, who will receive the engine.

Item 12—Aircraft model. This field identifies the model aircraft in which the engine is being installed or removed; for example, P3C.

Item 13—BUNO. Reports the six-digit bureau number (BUNO) of the aircraft that the engine is being installed in or removed from.

Item 14—Engine position. Indicates the position in which the engine is/was installed. For example, on a dual (2) engine aircraft, when the starboard (right) engine is removed, the entry should be 2.

Item 15—Reason for removal/repair/downgrade. This code describes why an engine is being removed or downgraded, or why the engine needs repair. Figure 9-4 shows a list of authorized reasons for removal, downgrade, and repair codes that are used in engine transaction reporting.

Item 16—Quick Engine Change Assembly (QECA). This item is reported to identify engines that are completely assembled with a Quick Engine Change Kit (QECK) and configured for a specific position. If a QEC does not have a specific position, report X.

Item 17—BCM/Inspection code. This code (beyond the capability of maintenance) identifies an engine that has been rejected by an I-level maintenance activity. This code identifies engines that I-level activities are not authorized to repair or are not able to repair due to lack of facilities, tools, equipment, technical data, technical skill, or parts.

Item 18—Job control number. This number identifies the specific Maintenance Action Form (MAF) associated with the repair process.

Item 19—Remarks. The Remarks section is used to amplify, explain, or describe any other significant data concerning a transaction. There are only 50 spaces available, so be concise.

For a more detailed description of ETR data elements and fields, refer to NAVAIRINST 13700.15. Activities that report engine transactions should maintain copies of submitted reports on file for at least 24 months.

Q13. What data elements are mandatory on all ETRs?

Q14. What rule should be used to report "flight hours since new" on an ETR?

Q15. ETRs should be maintained on file for what minimum time?

ENGINE TRANSACTION REPORT CORRECTION PROCEDURES

LEARNING OBJECTIVE: Describe ETR correction procedures.

When an error has been made in the submission of an ETR, a correction report should be sent immediately. Correction reports are normally submitted as a two-line report for each correction that is being submitted. These reports are prepared in the same basic format as regular reports. Correction reports should refer only to data reported in the original report and should include the same action and information addressees as the original. Correction reports submitted at the direction of higher authority should include the reference that directed the resubmission.

Correction reports are not assigned a new ETR number because these reports are correcting previously submitted ETRs. The first transaction of the message repeats the information previously reported in error with the exception of adding the word DELETE at the end of the transaction line. The second transaction of the report contains the corrected information and the word CORRECT at the end of the transaction line. Figure 9-5 shows an example of an ETR correction report.

When submitting correction reports, do not combine them with transactions reporting current actions. Submit correction ETRs separately. Submit correction reports within 24 hours after notification by

FM STRKFITRON ZERO ZERO ZERO
TO COMNAVAIRPAC SAN DIEGO CA.//N442G/N422C5/N422C52/N421/N421G//
COMSTRKFIGHTWINGPAC LEMOORE CA//N452/N45//
INFO COMFIFTHFLT//41//
COMCARGRU SEVEN
COMFAIRWESTPAC ATSUGI JA//N421A//
USS NIMITZ
COMCARAIRWG NINE
BT
UNCLASS //N13700//
MSGID/GENADMIN/VFA-000//
SUBJ/AIRCRAFT ENGINE TRANSACTION REPORT CORRECTION 01-98 (NAVAIR 13700-9)//
REF/A/MSG/STRKFITRON-000/091411Z JAN 98//
REF/EYDOC/NAVAIRINST 13700.15B//
NARR/REF A DELINEATES REPORTING PROCEDURES FOR THE AIRCRAFT ENGINE MANAGEMENT, REF B IS STRKFITRON 000 MSG ETR 01-98 SYSTEM.//
RMKS/1. IRT REF A CORRECT REF B VFA-000 ETR 01-98 IAW REF B AS FOLLOWS:
001/03.60347/24-74/98007/F404GE/402/63925/00927/FA18C/164968/2/5C/QWO007468/DELETE
001/0360347/24-74/98007/F404GE/402/63925/00927/FA18C/164966/2/5C/QW0007468/C0RRECT
2. REMARKS: 001 CORRECT BUNO TO 164966 VICE 164968

Figure 9-5.—Aircraft Engine Transaction Report (ETR) Correction.

higher authority. Should you find you have made an error after submission of an ETR, do not wait for notification to send a correction ETR. Draft the correction ETR immediately. Complete ETR correction procedures can be found in NAVAIRINST 13700.15.

Q16. What is the deadline for submitting ETR correction reports after notification from higher authority?

AIRCRAFT ENGINE RECORD CARD

LEARNING OBJECTIVES: Define the purpose of the Aircraft Engine Record card. Recognize retention requirements for Aircraft Engine Record cards of engines transferred to another reporting custodian.

The Aircraft Engine Record card is a 5- x 8-inch record card that provides a standardized record for local management of aircraft engines. This record is used in much the same way as the Aircraft Record "A" card in aircraft inventory reporting. One Aircraft Engine Record card is maintained on file for each assigned engine, and the card should be retained by an activity for 6 months after transfer of the engine to another reporting custodian. Whenever reportable actions occur, an ETR is submitted, and information is recorded on the Aircraft Engine Record card. An Aircraft Engine Record card is shown in figure 9-6.

For the most part, the card is self-explanatory. Notice that in figure 9-6, the blocks are numbered to correspond to items of information reported on ETRs. An understanding of data elements on ETRs will clarify the entries made on the Aircraft Engine Record card.

Q17. What card provides a standardized record for local management of aircraft engines?

Q18. Aircraft Engine Record cards should be retained for what minimum period after an engine is transferred to another reporting custodian?

END-OF-QUARTER (EOQ) REPORT OF FLYING HOURS FOR INSTALLED ENGINES

LEARNING OBJECTIVE: Identify data elements used on the EOQ report.

Engine reporting custodians submit an EOQ report of all installed engines. This report includes data up to 2400 hours on the last day of the quarter. The type of engine that is being reported determines the quarter in which EOQ reports are submitted. All type MK 529, O, R, and T (except T56) engines are reported as of 2400 hours on 31 January, 30 April, 31 July, and 31 October. All type T56 and CFM56 turboshaft engines are reported as of 28 or 29 February, 31 May, 31 August, and 30 November. All turbojet and turbofan engines, types F, J, and TF, are reported as of 31 March, 30 June, 30 September, and 31 December.

REQUIRED CONTENT OF EOQ REPORT

The EOQ report includes all engines in an installed status regardless of location. Therefore, engines in the reporting custodian's aircraft that are in SDLM or commercial facilities must be included. The reporting custodian must contact activities that have physical custody of the aircraft engines to determine the correct number of hours to be reported. An example of a EOQ naval message is shown in figure 9-7.

Notice that some of the data elements are not repeated, such as (4), (5) and (12), because the information is the same for each engine. The Status/STAR code for EOQ reports is 11-90. Other data elements used on the EOQ report are the same data elements used on ETR reports, so these data elements will not be discussed here. All engines should be listed by aircraft and in engine position number order.

EOQ REPORT CORRECTION PROCEDURES

LEARNING OBJECTIVES: Identify the two submission methods for EOQ reports. Identify the submission deadline of EOQ reports.

Correction procedures for EOQs are the same as for ETRs. Correction reports are not assigned a new ETR number. All addressees of the original message with a need to know should be included in the correction message. If you discover your own error, do not wait to be notified. You should draft a correction message. This will show your supervisors your initiative.

METHOD OF TRANSMISSION

Reporting custodians should send the EOQ report via naval message or should enter the report through an on-line AEMS terminal. Reports should be sent by 2400 hours on the 5th working day following the end of the month in which the engine is to be reported.

AIRCRAFT ENGINE RECORD **SEE NAVAIRINST 13700.15B**

NAVAIRINST 13700.15B **PREVIOUS ISSUES OF THIS FORM ARE OBSOLETE**

NAVAIR 13700/3 (REV 01-96) S/N 0102-LP-006-5100

ENG/PSSN/MODULE SER NR (1)	ENG/PSSN/MODULE TYPE MODEL (4)	ENG/PSSN/MODULE SERIES/DASH (5)	REPORTING CUSTODIAN UIC (6)	ACFT MODEL (12)	ACFT BUNO/PSSN (13)
0336428	TF34GE	400A	09021	S3B	158848

TRANS SER NO (0)	STATUS/ STAR (1)	JULIAN DATE (3)	HOURS SINCE OVHL (8)	HOURS SINCE NEW (9	REPT CUST UIC RECD/ FM TRF TO (10)	NEW CONT CUST UIC TRF TO (11)	POS NR (14)	RMVL DOWN (15)	QECA CONF (16)	BCM/ INSP CODE (17)	JCN (18)	REMARKS (21)
002	21-61	98037		01952	00602							RCVD FM VS-31

ENG/PSSN/MODULE SER NR (1)	ENG/PSSN/MODULE TYPE MODEL (4)	ENG/PSSN/MODULE SERIES/DASH (5)	REPORTING CUSTODIAN UIC (6)	ACFT MODEL (12)	ACFT BUNO/PSSN (13)
0336428	TF34GE	400A	09021	S3B	158848

Figure 9-6.—Aircraft Engine Record card.

R 031411Z OCT 97 ZYB
FM STRKFITRON ZERO ZERO ZERO
TO COMNAVAIRPAC SAN DIEGO CA//N421/N421G/N422C5/N422C51/N422C52/N422C56//
COMSTRKFIGHTWINGPAC LEMOORE CA//N45/N452//
INFO COMFAIRWESTPAC ATSUGI JA//N45//
COMCARGRU SEVEN
USS NIMITZ
COMCARAIRWING NINE
BT
UNCLAS //N13700//
MSGID/GENADMIN/VFA-000//
SUB J/AIRCRAFT ENGINE TRANSACTION/END-OF-QUARTER REPORT (EOQ)/NAVAIR 13700-9//
REF/A/DOC/NAVAIRINST 13700.15B/97MAR04//
AMPN/REF A DELINEATES REPORTING PROCEDURES FOR THE AIRCRAFT ENGINE MANAGEMENT SYSTEM.//
RMKS/1. EOQ REPORT STATUS-STAR CODE 11-90, EOQ DATE 97273 (PREPARED BY AZ2 M. CHRISTMAS, DEPLOYED), UIC 00000 ACFT MODEL: FA-18C, TOTAL:
12. ZERO AIRCRAFT IN REPAIR/MODIFICATION, ZERO BARE FIREWALLS THIS REPORT.

A. EOQ REPORT AS FOLLOWS:

(1)	(4)	(5)	(9)	(12)	(13)	(14)
0360012	F404GE	402	01632	FA18C	164900	1
0360156			00735			2
0360039			01568		164904	1
0360270			01060			2
0360151			01222		164906	1
0360014			02093			2
0360017			02024		164908	1
0360042			00861			2
0360286			01208		164980	1
0360194			01345			2
0360198			01272		164974	1
0360065			01876			2
0360316			00920		164960	1
0360216			01259			2
0360201			01552		164964	1
0360057			01573			2
0360263			01147		164968	1
0360347			00708			2
0360207			01527		164970	1
0360290			01080			2
0360287			01101		164972	1
0360047			01538			2
0360067			01629		164977	1
0360097			01517			2.//

Figure 9-7.—End-of-Quarter (EOQ) Report.

Q19. EOQ reports for TF34 engines should be submitted for periods that end on what dates?

Q20. Status/STAR code 11-90 is the code for what type of report?

Q21. What are the two transmission methods for EOQ reports?

Q22. What is the deadline for submission of EOQ reports?

SUMMARY

The Aircraft Engine Management System (AEMS) provides data on inventory management and the reporting of engines, propulsion systems, and modules. *Aircraft Engine Management Systems,* NAVAIRINST 13700.15, is the governing directive for AEMS. A Status code is used to describe the condition of an engine, the purpose for which the engine is used, or the state or progress an engine has reached in the maintenance cycle. The 11 series Status code is used to describe an installed operating engine. A STAR code describes or gives the reason for strikes, transfers, acquisitions, or removals. A STAR code is always used with an aircraft engine Status code and amplifies the Status code.

A controlling custodian is advised of the change of the status, use, or custody of an aircraft engine by an engine transaction report (ETR). An ETR can report a single transaction or several transactions of an evolution (for example, removal and transfer of an engine and subsequent receipt and installation of a replacement engine). AEMS on-line reporting is the preferred method of submitting ETRs for shore-based activities. ETRs are numbered sequentially throughout the calendar year. Data elements 0 through 6 and item 19 are mandatory on all ETRs. When flight hours are reported on an ETR, tenth of hours are dropped without rounding off the hours. ETRs should be retained on file for at least 24 months. After notification of an ETR error by higher authority, an ETR correction report should be submitted within 24 hours.

The Aircraft Engine Record card provides for a standardized record for local management of aircraft engines. An Aircraft Engine Record card should be retained for 6 months after an engine is transferred.

The type of engine that is being reported upon determines the quarter in which an end-of-quarter (EOQ) report is submitted. The Status/STAR code 11-90 is the code for an EOQ report. An EOQ report may be submitted by the AEMS on-line computer or by naval message. The deadline for an EOQ report is 1200 hours on the 5th working day that follows the end of the reporting period.

In this chapter, we discussed the importance of accurate aircraft engine management procedures. We found that each instance of engine status as well as change of custody must be reported daily. Like aircraft inventory reporting, engine management is essential to any naval aviation activity's primary concern—the ability to perform its mission.

ANSWERS TO REVIEW QUESTIONS

A1. The Aircraft Engine Management Systems (AEMS).

A2. Aircraft Engine Management Systems, NAVAIRINST 13700.15.

A3. A Status code.

A4. The 11 series.

A5. A STAR code.

A6. An aircraft engine Status code.

A7. A STAR code.

A8. By an ETR.

A9. 2400 hours on the first working day following the date the action occurred.

A10. Four.

A11. AEMS on-line reporting.

A12. 4-97.

A13. Items 0 through 6 and item 19.

A14. Drop tenths of hours, do not round off.

A15. 24 months.

A16. 24 hours after the notification.

A17. Aircraft Engine Record Card.

A18. 6 months.

A19. 31 March, 30 June, 30 September, and 31 December.

A20. EOQ reports.

A21. Naval message and entry in AEMS on-line computer.

A22. 2400 hours on the 5th working day following the end of the reporting period.